Causes of power shortage

2054. SHRI ABU ASIM AZMI: Will the Minister of POWER be pleased to state:

(a) whether it is a fact that several States and most particularly Uttar Pradesh are reeling under severe shortage of power;

(b) if so, the details thereof along with the reasons therefor, State-wise;

(c) whether the capacity of some power projects has not been increased for the last several years and a large number of projects are still waiting the requisite clearance causing decreasing trend in industrial and agricultural production in most of the States; if so, the details thereof, State-wise; and

(d) the concrete steps taken/proposed to be taken to increase power generation in the country?

THE MINISTER OF POWER (SHRI SUSHILKUMAR SHINDE): (a) and (b) There is an overall shortage of power in the country which varies from State to State, on season to season, day to day and hour to hour basis depending on the demand and supply of power. State-wise power supply position during April—November, 2006, including that in Uttar Pradesh is given in Statement -I (*See* below).

Main reasons for shortage of power include growth in demand for power outstriping the growth in generation, low plant load factor of some of the thermal generating units mostly in the State sector, high AT & C losses including theft of electricity, poor financial position of State Utilities, etc.

(c) and (d) Capacity addition of about 17,743 MW has taken place in various States/UTs in the 10th Plan (upto end of November, 2006) and projects of about 43,000 MW capacity are under construction. State-wise and Sector-wise details in this regard are given in Statement-II and III respectively (*See* below).

As per the Electricity Act, 2003 any generating company may establish, operate and maintain a generating station without obtaining a license under this Act, if it complies with the technical standards relating to connectivity with the grid specified by Central Electricity Authority. However, concurrence of Central Electricity Authority is required for setting up hydro-electric generation projects involving a capital expenditure exceeding a specified sum. As such, there are no proposal for thermal power projects pending for clearance in Central Electricity Authority.

Regarding environmental clearance for thermal power projects, Ministry of Power is having monthly coordination meeting with Ministry of Environment and Forests (MoE&F) and issues relating to environmental clearance for thermal power projects are sorted out in the meeting. No thermal power project has been held up due to Environment and Forest clearance from Ministry of Environment. Ten hydro-electric schemes with an aggregate installed capacity of 5481 MW concurred by CEA are to be cleared by Ministry of Environment and Forests from environmental and/or forest angle. Details in this regard are given in Statement IV (*See* below). No hydro-electric scheme is pending for concurrence of CEA at present.

The following steps have been taken/are being taken to improve power generation in the country:

(i) Rigorous monitoring of capacity addition of the on-going generation projects.

(ii) Advance planning of generation capacity addition projects for the 11th Five Year Plan.

(iii) Implementation of Ultra Mega Power Projects of 4000 MW each to achieve benefit of economy of scale.

(iv) "Partnerhisp in Excellence" Programme starting with adoption of better operation and maintenance (O&M) practices to enable enhancement of Plant Load Factor (PLF) of existing thermal power stations through tie-up with well performing power utilities as a pre-cursor to renovation and modernization.

(v) Renovation, modernization and life extension of old and inefficient generation units with interest subsidy on loans by the Power Finance Corporation and Rural Electrification Corporation under "Accelerated Generation and Supply Programme" (AG&SP).

(vi) Tapping of surplus power from captive power plants.

(vii) Utilization of unutilized capacity of gas based stations on liquid fuel.

(viii) Coordinated operation and maintenance of hydro, thermal, nuclear and gas based power stations to optimally utilize the existing generation capacity.

(ix) Optimum utilization of available power by strengthening of inter-State and inter-regional transmission capacity.

Statement-I

State-wise power supply position

State/ System/ Region	April, 2006—November, 2006 Energy				April, 2006—November, 2006 Peak			
	Requirement (MU)	Availability (MU)	Surplus/ (MU)	Deficit(-) (%)	Demand (MW)	Met (MW)	Surplus/ (MW)	Deficit (-) (%)
1	2	3	4	5	6	7	8	9
Chandigarh	966	964	-2	-0.2	264	247	-17	-6.4
Delhi	16,200	15,855	-345	-2.1	4,000	3,736	-264	-6.6
Haryana	18,454	16,338	-2,116	-11.5	4,837	4,201	-636	-13.1
Himachal Pradesh	3,266	3,194	-72	-2.2	801	773	-28	-3.5
Jammu & Kashmir	7,125	5,179	-1,946	-27.3	1,470	1,232	-238	-16.2
Punjab	28,597	25,332	-3,265	-11.4	8,971	6,558	-2,413	-26.9
Rajasthan	21,128	20,357	-771	-3.6	4,954	4,618	-336	-6.8
Uttar Pradesh	38,670	32,288	-6,382	-16.5	9,184	7,531	-1,653	-18.0
Uttaranchal	3,851	3,694	-157	-4.1	1,108	991	-117	-10.6
Northern Region	**138,257**	**123,200**	**-15,057**	**-10.9**	**31,516**	**26,644**	**-4,872**	**-15.5**
Chhattisgarh	9,095	8,571	-524	-5.8	2,157	1,817	-340	-15.8
Gujarat	39,378	34,929	-4,449	-11.3	11,616	8,062	-3,554	-30.6
Madhya Pradesh	22,752	20,037	-2,715	-11.9	6,910	6,404	-506	-7.3
Maharashtra	68,450	57,967	-10,483	-15.3	16,301	12,557	-3,744	-23.0
Daman & Diu	1,056	918	-138	-13.1	208	183	-25	-12.0
Dadra Nagar Haveli	1,906	1,864	-42	-2.2	415	366	-49	-11.8
Goa	1,713	1,709	-4	-0.2	389	389	0	0.0
Western Region	**144,350**	**125,995**	**-18,355**	**-12.7**	**35,777**	**26,882**	**-8,895**	**-24.9**

1	2	3	4	5	6	7	8	9
Andhra Pradesh	38,873	37,947	-926	-2.4	9,167	8,281	-886	-9.7
Karnataka	25,451	25,079	-372	-1.5	6,130	5,611	-519	-8.5
Kerala	9,726	9,576	-150	-1.5	2,672	2,602	-70	-2.6
Tamil Nadu	40,718	40,183	-535	-1.3	8,609	8,449	-160	-1.9
Pondicherry	1,215	1,215	0	0.0	265	265	0	0.0
Lakshadweep	16	16	0	0.0	5	5	0	0.0
Southern Region	**115,983**	**114,000**	**-1,983**	**-1.7**	**25,165**	**23,520**	**-1,645**	**-6.5**
Bihar	5,460	5,021	-439	-8.0	1,399	1,162	-237	-16.9
DVC	7,624	7,487	-137	-1.8	1,650	1,597	-53	-3.2
Jharkhand	2,811	2,680	-131	-4.7	687	671	-16	-2.3
Orissa	11,198	11,025	-173	-1.5	2,550	2,514	-36	-1.4
West Bengal	18,277	17,955	-322	-1.8	4,784	4,669	-115	-2.4
Sikkim	138	136	-2	-1.4	40	40	0	0
Andaman-Nikobar	160	120	-40	-25.0	40	32	-8	-20
Eastern Region	**45,508**	**44,304**	**-1,204**	**-2.6**	**10,491**	**10,058**	**-433**	**-4.1**
Arunachal Pradesh	160	154	-6	-3.8	77	76	-1	-1.3
Assam	2,918	2,709	-209	-7.2	771	688	-83	-10.8
Manipur	330	316	-14	-4.2	106	101	-5	-4.7
Meghalaya	932	740	-192	-20.6	343	198	-145	-42.3
Mizoram	150	143	-7	-4.7	70	68	-2	-2.9
Nagaland	235	226	-9	-3.8	79	79	0	0.0
Tripura	577	532	-45	-7.8	169	142	-27	-16.0
North Eastern Region	**5,302**	**4,820**	**-482**	**-9.1**	**1,407**	**1,166**	**-241**	**-17.1**
ALL INDIA	**449,400**	**412,319**	**-37,081**	**-8.3**	**98,435**	**86,425**	**-12,010**	**-12.2**

Statement-II

Generation capacity addition during the 10th Plan

(Figures in MW)

	State/UT	State Sector	Private Sector	Central Sector	Total
1.	A&N Islands	6	20		26
2.	Andhra Pradesh	450	668	1000	2118
3.	Assam				0
4.	Chhattisgarh				0
5.	Delhi	225.78			225.78
6.	Gujarat	1878.62			1878.62
7.	Haryana	500			500
8.	Himachal Pradesh	84	300	1800	2184
9.	Jammu & Kashmir				0
10.	Jharkhand		120		120
11.	Karnataka	500			500
12.	Kerala				0
13.	Lakshadweep				0
14.	Madhya Pradesh	95		1500	1595
15.	Maharashtra			1820	1820
16.	Goa				0
17.	Manipur	18			18
18.	Meghalaya			25	25
19.	Mizoram	22.92			22.92
20.	Nagaland				0
21.	Orissa			2000	2000
22.	Arunachal Pradesh				0
23.	Punjab				0
24.	Pondicherry				0
25.	Rajasthan	520.32			520.32
26.	Tamil Nadu	374	422.6	520	1316.6
27.	Tripura	63			63
28.	Uttar Pradesh	210		1210	1420
29.	Uttaranchal		400	780	1180
30.	Bihar				0
31.	West Bengal			210	210
32.	Sikkim				0
	TOTAL	4947.64	1930.6	10865	17743.24

Statement-III

List of generation projects under construction

A. 10th Plan projects under construction likely to be commissioned during November, 2006 to March, 2007

Name of the project	Benefits (MW)
1	2
Hydro	
Tehri St. I	500.00
Dulhasti	390.00
Largi	42.00
Maneri Bhali - II	304.00
Ghatghar PSS	250.00
Jurala Priya	39.00
Purulia PSS IV	225.00
Balimela ST. II	150.00
Karbi Langpi	100.00
Sub Total - Hydro	**2000.00**
Thermal	
Giral Lignite	125.00
KLTPS Ext. (Panan)	75.00
Paricha Extn.	210.00
GHTPP II	500.00
Sipat II	1000.00
Vindhyachal	500.00
Korba East Ext.	500.00
Parli TPP Ext.	250.00
Paras Ext.	250.00
Raigarh TPP I	250.00
Birsingpur Ext.	500.00
Rayalseema II	420.00
Bellary	500.00
Mezia U 5 & 6	500.00
Kahalgaon II	1500.00
Sagardighi 1 & 2	600.00

1	2
Santaldih TPP	250.00
Bakreshwar 4	210.00
Durgapur	300.00
Dholpur CCGT	220.00
Sugen Akhakhol	365.00
Dhuvaran CCGT	40.00
Dabhol CCGT II	704.00
Konaseema CCGT	445.00
Gautami CCGT	464.00
Sub-Total - Thermal	**10678.00**
Nuclear	
Nuclear Kaiga U - 3	220.00
Sub-total - Nuclear	**220.00**
TOTAL UNDER CONSTRUCTION 10TH PLAN	12898.00
B. 11th Plan projects	
Hydro Projects	
Parbati - II	800
Chamera - III	231
Parbati - III	520
Sewa -II	120
Uri-II	240
Nimoo Bazgo	45
Chutak	44
Omkareshwar	520
Teesta Low Dam-III	132
Teesta Low Dam-IV	160
Subansiri Lower	2000
Koteshwar	400
Kameng	600
Kol Dam	800
Lohari Nagpala	600
Teesta V	510

1	2
UHL -III	100
Baglihar-I	450
Jurala Priyadarshni	195
Nagarjuna Sagar TR	50
Varahi Extn.	230
Athirapalli	163
Kutayadi Ext.	100
Bhawani Barrage II & III	60
Purlia PSS	675
Myntdu St-I	84
Budhil	70
Allain Duhangan	192
Malana II	100
Karcham Wangtoo	1000
Srinagar	330
Maheshwar	400
Chujachen	99
Sub Total Hydro 11th Plan	12020
Thermal Projects	
Dadri Ext. (U-5)	490
Sipat I	1980
Bhilai JV	500
Korba III	500
Barh-I	1980
Farakka Stage-III	500
Chandrapur	500
Barsingsar LIG	250
Neyveli-II LIG	500
Yamuna Nagar	600
Giral*U-2	125
Chabra TPS	500
Kota U7	195

1	2
Suratgarh Ext.	250
Dholpur	110
Parichha Ext.	500
Harduaganj	500
Surat Lignite Ext.	250
Amarkantak	210
Parli Ext. U-2	250
Paras Ext. U-2	250
Bhopalapally (Kaktiya)	500
Vijaywada TPP	500
Bellary TPS U-2	500
Raichur U-8	250
Valuthur Extn.	92
Bakreshwar U-5	210
Lakwa WH	37.2
Dimapur DG	23
Raigarh Ph. II	750
Pathadi (Lanco) U1	300
Pathadi (Lanco) U2	300
Sugen Torrent	752
Trombay TPS	250
Budge-Budge Ext.	250
Sub-Total Thermal	**15654**
Nuclear Projects	
RAPP U5 & 6	440
Kudankulam U 1, 2	2000
PFBR (Kalapakkam)	500
Kaiga U-4	220
Sub-Total Nuclear	**3160**
TOTAL UNDER CONSTRUCTION 11TH PLAN	**30834**
Total under construction (November, 2006—March, 2012)	**43732**

Statement-IV

Hydro Electric Projects accorded techno-economic concurrence by CEA but require Environmental and /or Forest Clearances

Sl. No.	State/ Name of the Scheme/Sector	Inst. capacity UNTS xUnts x MW	MW	Status of Environment Clearance	Status of Forest Clearance
1	2	3	4	5	6
1	Lata Tapovan (Central Sector)	3x57	171	Proposal has been submitted to MOEF on 9.10.2006	Case has been considered by Forest Advisory Committee of MoEF 27.09.2006.
2.	Vishnugad Pipelkoti (Central Sector)	4x111	444	EIA & EMP studies submitted to State Pollution Control Board for clearance. Public hearing was scheduled to be held on 17.10.2006. After getting No Objection Certificate (NOC) from State Pollution Control Board, the case will be submitted to MoEF.	About 80 ha. of forest land is required. proposals for land acquisition for 23.318 ha. of forest land has been forwarded by Nodal Officer to Chief Conservator of Forests, Lucknow.
3.	Matnar (State Sector)	3x20	60	Various points raised by EAC of MoEF complied on 16.07.2003. MoEF has intimated that the case for environment clearance would be considered alongwith the case of diversion of forest land.	Project involves 92. ha. of forest land and is under consideration of State Forest Department.

4.	Teesta St-III (Private Sector)	6x200	1200	Cleared on 4.08.2006	Project involves 80.280 ha. of forest land. Joint inspection was completed on 15.10.2006 and final revenue maps are under preparation. Forest Application will be taken up immediately after completion of the joint inspection reports.
5.	Tipaimukh (Central Sector)	6x250	1500	Public hearing for Mizoram was held on 2.12.2004 and for Manipur on 17.11.2006 in Churachandpur district and will be held on 22.11.06 in Tameglong district. After obtaining NOC from State Pollution Control Board the porposal will be submitted to MoEF.	Case referred to State Forest Department by NEEPCO in April, 2003. Govt. of Mizoram forwarded their case to MoEF. Govt. of Manipur is likely to forward the case of MoEF in Dec., 2006 after completion of ongoing assessment of vegetation etc.
6.	Pakal Dul (Doda) (Central) Sector)	4x250	1000	EIA & EMP studies are under finalization. After submission of the same, the public hearing would be held.	386 ha. falls under Kistwar High Altitiude National Park (KHANP). Forest clearance for 311 ha. (Falling outside KHANP) has been accorded by the State Govt. on 16.06.2005. Proposal for dereservation of balance land under process in MoEF.

1	2	3	4	5	6
7.	Kotlibhel-IA (Central Sector)	3x65	195	EIA and EMF have been submitted to State Pollution Control Board for conducting Public Hearing etc. After receipt of NOC from State Pollution Control Board, the case would be submitted to MoEF.	Forest clearance proposal is under preparation in State Forest Department, who will forward the same to MoEF.
8.	Kotlibhel-IB (Central Sector)	4x80	320	EIA and EMP are under preparation. After completion of EIA and EMP studies, public hearing meeting would be held.	Proposal has been submitted to State Forest Department. State Forest Department would be forwarding the same to MoEF.
9.	Kotlibhel-II* (Central Sector)	8x66.25	530	EIA and EMP are under preparation. After completion of EIA and EMP studies, public hearing meeting would be held.	Proposal has been submitted to State Forest Department. State Forest Department would be forwarding the same to MoEF.
10	Loktak downstream (Central Sector)	2x33	66	The Environment and forest clearance was accorded by MoEF for original proposal. In the revised configuration project involves construction of 28 m barrage in place of 64 m high dam. Less submergence would be involved. MoEF has been informed accordingly on 7.11.2006. MoEF reply/clearance awaited.	
	TOTAL		5481		